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Back to Normal

BOOK REVIEW: The Wisdom of Sharing the Peaceful Atom

Atoms for Peace: A Future after Fifty Years?
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When President Dwight Eisenhower made his historic Atoms for Peace address to the UN General Assembly in December 1953, that body had a total of 60 members. Now there are 192. By itself, this increase in independent countries, dramatic as it is, might be enough to justify a re-examination of the wisdom of sharing the peaceful atom. But other changes that have altered the assumptions underlying the proposal compel such a re-examination.

With the United States and the Soviet Union engaged in an arms race involving nuclear and thermonuclear weapons, Eisenhower's speech foresaw applying "atomic energy to the needs of agriculture [and] medicine…and to provide abundant electrical energy." To prevent misuse of the peaceful atom and to prevent acquisition of the capability to develop nuclear weapons, reliance was placed on international inspections (safeguards) and export controls. Few countries, it was believed, had the capability to develop the enrichment and reprocessing technology and equipment that would allow them to produce the enriched uranium or separated plutonium needed for nuclear weapons. Safeguards would prevent diversion of this material once imported from the few potential suppliers, and export controls would prevent those suppliers from providing critical technology and equipment to foreign weapons programs.

This approach can be seen in the subsequent drafting of the 1968 nuclear Nonproliferation Treaty (NPT). While Article IV sought to enshrine the goal of Atoms for Peace, Article III requires non-nuclear-weapon states to accept International Atomic Energy Agency (IAEA) safeguards "for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing the diversion of nuclear energy from peaceful uses to nuclear weapons" (emphasis added). This focus on diversion also is contained in the safeguards agreements developed for non-nuclear-weapon states-parties to the NPT, commonly referred to as 153 agreements. Scant attention was devoted in those agreements to undeclared equipment or materials because of the assumption that constructing such capabilities was beyond most parties. Meanwhile, those countries capable of exporting technology related to enrichment, reprocessing, or use of fissile material would ensure that such items were subject to IAEA safeguards. To provide precision on what was subject to safeguards, NPT states-parties capable of such exports met and elaborated a list called the Zangger Committee Understandings. India's 1974 test of a "peaceful" nuclear explosive device led to the establishment of the Nuclear Suppliers Group (NSG) and to even stricter controls on enrichment and reprocessing technology. These control lists were expanded several times throughout the 1970s and 1980s.

This system of enforced scarcity worked remarkably well for several decades. Because change is the only constant, however, it soon became necessary to adapt the original regimes. More countries were not only gaining their independence but also enhancing their industrial capability.

The 1991 discovery of Iraq's nuclear weapons program forced action. Through program 93+2 and the 1997 Model Additional Protocol, the IAEA sought to respond to the increasing capability of additional countries to manufacture nuclear-related technology by broadening its safeguards approach from merely looking for diversion of declared materials to looking for undeclared equipment and material. In the words of NPT Article III, the IAEA is now seeking to verify a party's "fulfillment of its [NPT] obligations."

Meanwhile, some countries were defeating export controls on sensitive technology and equipment by acquiring individual components. The NSG responded by placing limitations on such components and by making non-NPT states-parties with unsafeguarded programs ineligible for new civil nuclear supply. This latter reform decreased the risk of diversion of imported nuclear items but, more importantly, had the effect of granting preference to NPT

states-parties in civil nuclear cooperation, a benefit they had long sought as a reward for joining the NPT. These efforts were further bolstered by the indefinite extension of the NPT in 1995, which made permanent the norms and principles underlying the nuclear nonproliferation regime.

These adaptations were essential to meet the growing proliferation challenge. Not unexpectedly, the challenges continue. One of the greatest challenges is the prospect of cooperation among proliferators or between proliferators and would-be proliferators. Pakistani scientist Abdul Qadeer Khan's actions with Iran, Libya, and North Korea must leave any informed observer with the unsettling concern that anybody with the necessary resources could obtain the technology for enrichment on the black market and obtain the needed equipment clandestinely.

Indeed, the concern must extend to the design of nuclear weapons because this was also allegedly provided by Khan to Libya and perhaps others. When the fact that a Malaysian company manufactured centrifuges is combined with the knowledge Khan shared on evading export controls, there must be greater concern that "anybody can do it." If a country as isolated as North Korea can build and operate a reactor and a reprocessing plant, can export controls combined with IAEA safeguards ever again be considered adequate? Free trade also plays a role as the resultant further spread of industrialization means that increasingly complex factories and processes are built in ever-growing locales. It is understandable, albeit mistaken, for some to conclude that the nonproliferation effort should be abandoned and the focus placed instead on counterproliferation.

This is the context in which *Atoms for Peace: A Future After Fifty Years?* appears. The book is a compilation of papers from a conference held in 2003, and admittedly the passage of three and a half years from that conference to the publication of this book diminishes its value. Yet, most papers are presented by leading nonproliferation experts and wrestle with issues still germane today. Robert Litwak of the Woodrow Wilson Center; Ambassador Linton Brooks, then-administrator of the National Nuclear Security Administration; and Laura Holgate of the Nuclear Threat Initiative are among the authors dealing with nuclear terrorism. Daniel Poneman, a senior nonproliferation official in the Clinton and Bush administrations, and Lawrence Scheinman of the Monterey Institute are among the authors looking at the future. Thus, editor and contributing author Joseph Pilat of Los Alamos National Laboratory has performed a valuable service in making this compendium of articles available in book form. No one can walk away from reading this book without agreeing with his overall conclusion:

So, mixed results and all, the legacy of Atoms for Peace profoundly influences the debate on all things nuclear. It may be expected that it will be defended or attacked, as pundits, policy analysts, and politicians put forward divergent proposals for a future in which nuclear energy remains as it was understood at the dawn of the nuclear age—a Janus-headed reality posing both extraordinary risks and benefits.

Any serious reader seeking to understand this tension will find in this book a wealth of information.

But what of the concern regarding widespread industrialization diminishing the effectiveness of the classical nonproliferation tools: export controls and international safeguards? Although several of the papers in the book touch on this problem, one chapter by Christopher Chyba of Princeton University succinctly sets forth the problem and begins the process of searching for answers. The goal he espouses for the United States is admirably straightforward as he notes the contrast between nuclear and biological weapon futures: "We may no longer be in a strong position to shape [the biological weapons future] although we need to make wise choices where we can. We want to continue to be able to shape our nuclear future" (emphasis added). Chyba readily concludes that there is no silver bullet. Rather, he espouses "a self-reinforcing web of nonproliferation measures" focusing both on supply-side and demand-side measures.

It has long been understood that export controls and safeguards can slow proliferation but not prevent it. Global industrialization is continually shortening the amount of time that export controls and safeguards can buy. Chyba concludes that this dictates far more attention being paid to demand-side measures "even as we preserve the importance of supply-side measures." Tellingly, he concludes, "[t]his will continue to require an approach to the proliferation challenge that weighs the long-term consequences of short-term actions, and has the patience to make strategic choices that are in the long-term national interest."

All the contributors to this book seem to agree on Chyba's central point: the United States needs to provide the leadership to shape the world's nuclear future. The tragedy is how often the current administration has failed that leadership test. This is not to say that everything that has gone wrong in the nonproliferation field is the fault of the United States. The current administration, however, has often failed abysmally in its response to those exogenous events.

The administration not only fails to realize that the nonproliferation regime consists of several strands and that weakening one strand weakens all, but it also fails to appreciate that the ever-diminishing time that traditional nonproliferation tools make available must be used wisely.

In part, that failure is structural: politicians think in two- to four-year increments while within the Department of State, where nonproliferation has increasingly become the province of the Foreign Service, the three-year assignment cycle often defines the time horizon. With such a structure, weighing the long-term consequences of short-term actions, as Chyba recommends, has become ever more difficult. The structural problems were increased by an ill-advised reorganization of the nonproliferation bureau in the State Department that diluted its nonproliferation focus with other responsibilities and was used as an opportunity to marginalize many career civil servants with technical knowledge and experience while increasing the role of "right-thinking" political appointees. Although structural problems contribute, ideological rigidity combined with overwhelming hubris and a failure by President George W. Bush and his national security advisers to maintain discipline have been responsible for this administration's failure to use wisely the time purchased by nonproliferation efforts.

Through seven prior presidents, a central pillar of U.S. nonproliferation policy has been support for universal adherence to the NPT. Thus, when North Korea threatened to withdraw from the NPT in 1993, the Clinton administration worked with Russia and the United Kingdom, the three NPT depositary governments, on a statement "questioning" Pyongyang's stated justification for withdrawal. This concern was incorporated into UN Security Council Resolution 825. By contrast, the Bush administration silently acquiesced in 2003, finding itself constrained because it had recently withdrawn from the ABM Treaty; the withdrawal clauses in both treaties are virtually identical. Only after North Korea detonated a nuclear weapon was its NPT withdrawal condemned by a Security Council resolution.

The North Korea issue has been a battleground between those advocating regime change and those seeking behavior change. Advocates of regime change prevailed, relying on what is now admitted to be less dramatic evidence for their claim of North Korean cheating than they then believed, and the United States walked away from the 1994 Agreed Framework, which the Clinton administration had negotiated with Pyongyang. North Korea shortly thereafter responded by throwing out the IAEA, which had maintained a continuous presence at their plutonium facilities; separated what is believed to be five to seven bombs' worth of plutonium from spent fuel; and conducted a nuclear test. The sensible course of maintaining controls over plutonium that was known to exist while seeking to deal with an enrichment program that might exist was not pursued.

The most recent evidence of the ongoing battle within the administration was the imposition of financial sanctions on North Korea, which occurred near the conclusion of the September 2005 six-party agreement on denuclearization principles. The Bush administration's approach to dealing with North Korea could, until recently, be appropriately characterized as consisting of three no's—no carrots, no sticks, no results. One is left with the sad belief that the deal with North Korea that the Bush administration currently appears to be pursuing is one that could have been achieved much earlier and without removing all constraints on plutonium.

On Iran, the administration was correct when it sought prompt referral of the matter to the UN Security Council. Yet, those efforts failed because the administration was not trusted after its "misuse" of Security Council resolutions to justify its invasion of Iraq and because the administration was unwilling to incur the costs needed to sell this approach. The Security Council's failure was compounded by the administration's initial refusal to collaborate outside the Security Council with China, Russia, and the European Union. The administration simply did not seem to consider that others were unwilling to place significant sticks on the table unless the United States was willing to place significant carrots. The time for solving nonproliferation problems on the cheap is past. In order to demonstrate seriousness, Washington must be prepared to pay significant costs to prevent proliferation.

The result was the United States sitting on the sidelines from 2003-2005 while the EU-3 (France, Germany, and the United Kingdom) as well as Russia and China continued searching for incremental steps that might nudge Iran into action. The Europeans, who could impose sanctions without Security Council action by withholding trade benefits, are following the U.S. model by refusing to incur significant costs. While the West dithers, Iran's enrichment program is rapidly expanding.

Meanwhile, IAEA Director-General Mohamed ElBaradei, not trusting Washington's leadership after U.S. disregard for IAEA conclusions on Iraq, has moved the agency from its technical role into an ever more political role by seeking to ensnare Iran with incremental steps. This approach has backfired and has emboldened Iran in the belief that the penalties that it must endure for proliferation are bearable.

An important strand of the overall nonproliferation regime is the universal condemnation of all nuclear proliferation. The administration has virtually severed this strand by succumbing to the siren song from India. The Bush administration's view is that India, as a democracy, a huge market for U.S. products, and a potential ally in "containing" China, should be exempt from the principle that all proliferation is bad. The problem is not that the administration failed to get enough from India for abandoning principle. The problem is abandoning principle. Over the years, the United States on at least four occasions has silently placed bilateral pressure on friends to halt their nascent proliferation programs. Similar future efforts will be far less likely to succeed now that the United States has agreed that some proliferation is acceptable.

The Bush administration's antipathy toward multilateral instruments and organizations has led to some disdainful treatment of the NPT and its review process, the IAEA, and export control regimes such as the NSG. Hostility combined with a lack of U.S. leadership has increased downward pressure on the overall regime.

Unwilling to force compliance with its decision to seek prompt entry into force of its additional protocol, the White House has accommodated the Pentagon's delaying tactics and supported implementing legislation that is inconsistent with the terms of the protocol. The protocol is still not in force for the United States with the result that Washington has little ability to persuade others to accept it.

Instead of seeking to capitalize on U.S. ascendancy in smart conventional weaponry by minimizing the importance of nuclear weapons, the administration seeks to build new nuclear weapons and shorten the time required to resume testing. Under Department of Defense pressure, the administration failed to follow up on the promising May 2002 U.S.-Russia summit at which Bush and Russian President Vladimir Putin set out the parameters of a comprehensive strategic nuclear dialogue. Many countries view these U.S. actions as showing a lack of compliance with Article VI of the NPT, undermining our ability to convince others to take Iranian noncompliance seriously.

The book contains a chapter written by then-Assistant Secretary for Arms Control Stephen Rademaker that parrots the expected ideological catechism to justify inaction on further nuclear arms controls: "It is simplistic and misleading to suggest that countries pursue nuclear weapons primarily in reaction to the nuclear policies of the United States and other legitimate nuclear weapon states. Countries bent on acquiring nuclear weapons have their own reasons." It is not false modesty to profess that no one, including political appointees of this administration, really knows why a country may decide to acquire nuclear weapons. What is reasonable to assume is that all countries perform some semblance of a cost-benefit analysis. The logic of their analysis may not be the same as ours. Recall that the South African rationale for acquiring nuclear weapons was to draw in the major powers should a civil war develop there. A truly humble foreign policy would candidly admit that we do not know why countries decide to proliferate but pay attention to all the strands that make up the nonproliferation web and take logical actions to make acquisition less attractive. At a minimum, an appropriate rationale would eschew arguments that the United States must have nuclear weapons to deter the same threats that other countries also face.

The foregoing critique is not meant to imply that the Bush administration has done nothing correct in the nonproliferation field. As indicated earlier, recent administration steps seem to be evolving toward a constructive approach to North Korea. The administration also has moved the United States into a collaborative posture with China, the EU, and Russia on dealing with Iran's program. These actions leave thoughtful observers to wonder whether North Korea and Iran are so much more "evil" than Libya as to justify these costly delays in rational approaches.

Also quietly but effectively, the administration continues its effort to wrap up all remaining remnants of the Khan network. It secured passage of Security Council Resolution 1540 to try and prevent terrorists from acquiring weapons of mass destruction (WMD), but it thus far has failed to devote enough time, attention, and resources to the 1540 Committee to ensure that all states not only enact export controls but effectively enforce them. In a rare departure, the administration in its first term also made available increased funding for IAEA safeguards. The much-touted Proliferation Security Initiative provides some modest benefits for what one can only hope will be rare cases when last-minute high seas interdiction of proliferation-related equipment or materials is necessary. Further, based on its overall posture at the recent first preparatory meeting for the 2010 NPT review conference, there seems to be at least a hint that the administration is beginning to understand the value of multilateral institutions.

It is to be hoped that some of these favorable straws in the wind will become U.S. policy. Elliot Richardson asserted in 1969 that the United States had a history of being lucky, but now the challenges facing us require that we be good. This administration has seriously eroded the margin for error that we once had. Rather than relying on the diminishing scope for luck, it is

past time that the administration starts pursuing a policy that strengthens all the strands making up the nonproliferation regime.

This starts with a realization that the traditional tools of export controls and safeguards continue to be important. Increasing industrialization is broadening the number of possible proliferators, but it fortunately remains true that the technology for centrifuge enrichment, for example, is beyond the grasp of most countries acting alone. The effectiveness of export controls, however, is often undermined by the "ignorance excuse." Exporting companies avoid penalties for violating export laws by asserting their ignorance of the fact that the item shipped was controlled or was destined to a proscribed location. States whose nationals evade the export laws of others to import a controlled item avoid sanctions by asserting their ignorance of the activities of their nationals.

Exporting nations must hold their companies accountable by presuming knowledge, and sanctions should be applied to any country whose nationals engage in circumvention. To have any chance of obtaining support for our compliance concerns, we must demonstrate an understanding of the concerns of others about our compliance with the NPT, and we must demonstrate consistency. Making an exception for India was always a bad idea; it now deserves a quiet burial. In short, this administration's actions must match its rhetoric about the importance of nuclear nonproliferation.

Although our understanding of other countries' cost-benefit analysis will necessarily remain incomplete, we can logically assume that security concerns are a primary factor in determining whether a country proliferates. If the nonproliferation regime can give countries confidence that those who could threaten their security are not acquiring nuclear weapons, they should have less interest in acquiring nuclear weapons. It is only when countries conclude that the costs of proliferating have gone down and the benefits remain or are increasing that there are increased risks of proliferation.

Will Persian Gulf states refrain, should Iran complete its drive for nuclear weapons? Will Japan continue to rely on the U.S. nuclear umbrella if North Korea's weapons program continues to advance, and what of South Korea? What about the countries not presently on our radar screen that see India continuing to acquire nuclear weapons while engaging in nudear commerce with the United States and presumably remaining a prime prospect for a permanent seat on an expanded Security Council? Finally, if the United States continues to assert that we must have nuclear weapons to deal with other WMD threats or for global prestige, why should other countries not emulate our example? We must strengthen all the strands of the nonproliferation regime and, as Chyba asserts, weigh "the long-term consequences of short-term actions, and [have] the patience to make strategic choices that are in the long-term national interest." Nonproliferation is a cooperative effort. The United States must cooperate as well, even while asserting leadership.

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